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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,459	01/27/2004	Toru Mizuno	118482	1178
25944	7590	12/28/2005		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER HSIEH, SHIH WEN	
			ART UNIT 2861	PAPER NUMBER

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/764,459

Applicant(s)

MIZUNO ET AL.

Examiner

Shih-wen Hsieh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4-26-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claims 4, 14 and 15 are objected to because of the following informalities:

In regard to:

Claim 4:

Line 3, please change "the time" into "a time" to correct a minor lack of antecedent basis problem.

Line 3, please change "a usage" to "an usage".

Claims 14 and 15:

The followings are corrections to a minor lack of antecedent basis problem:

Change "the capability of the air pump" and "the ambient temperature" into "capability of the air pump" and "ambient temperature" similar to those in claims 12 and 13.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis et al. (US Pat. No. 6,290,343 B1).

In regard to:

Claim 1:

Lewis et al. teach:

An inkjet printer comprising:

ink cartridges (313, fig. 1) which reserve ink supplied to an inkjet head (340, fig. 1), refer to col. 5, lines 12-18; and

a pressurized air generating device (376, fig. 1) which generates pressurized air supplied to the ink cartridges, refer to col. 5, lines 22-32

wherein the pressurized air generating device comprises a high pressure mode to generate pressurized air at predetermined pressure P1 and a low pressure mode to generate pressurized air at pressure P2 which is lower than the pressure P1, refer to col. 6, lines 41-47 and col. 19, lines 34-39; and for the air pressure system (col. 19, line 35)(APS), please refer to col. 13, line 16+. Also please refer to fig. 23 for high pressure

mode and low pressure mode, e.g., the third row in fig. 23 can be considered as P1, and the fourth row can be considered as P2, and $P2 < P1$.

Claim 2:

Lewis et al. further teach:

an air discharge device which discharges air accumulate in supplying paths of the ink with the pressurized air, refer to fig. 23 the third row: "New ink system installed- Air purge from ink tubes at a pressure of 1.5 Psi; and.

an ink vacuum device which vacuums the ink from the inkjet head, refer to fig. 23, the fourth row: "Prime print heads with positive ink pressure of 0.2 psi,

wherein the pressurized air generating device is adapted to be in the high pressure mode when the air discharge device when the air discharging device is used, and the pressurized air generating device is adapted to be in the low pressure mode to pressurize the ink when the ink vacuum device is used, refer to fig. 23 and discussion above for this claim.

Claim 3:

Lewis et al. further teach:

wherein the air discharge device is adapted to be used while the pressurized air generating device is operated, refer to fig. 23 the third row.

Claim 4:

Lewis et al. further teach:

wherein the ink is pressurized by the pressurized air generating device at least

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by the time when a vacuum of the ink is terminated in a usage of the ink vacuum device, refer to col. 13, line 16+, specially lines 32-33.

Claim 5:

Lewis et al. further teach:

wherein the pressurized air generating device is constituted with an air pump (376, fig. 1A or 516, fig. 3) and a drive motor which drives the air pump, please note: although a motor is not taught by Lewis et al., however, a motor is inherent to either a pump or a compressor as a prime motive force, and

wherein rotational speed of the drive motor is kept at a constant speed and driving time of the drive motor is controlled according to capability of the air pump when the air discharge device is used, refer to col. 5, lines 28-32 and col. 13, line 16+, specially, lines 32-33.

Claim 6:

Lewis et al. further teach:

wherein the capability of the air pump is determined based on a correlative characteristic between the rotational speed of the drive motor and the air pressure generated by the air pump, refer to col. 5, lines 28-32 and col. 13, line 16+, specially, lines 32-33.

Claim 7:

Lewis et al. further teach:

wherein the driving time is further controlled according to ambient temperature of the air pump, refer to claim 5 above, because the air pressure is reliably controlled in

required magnitude in required time, therefore, ambient temperature is also one of the factor that the APS is concerned in controlling the required pressure in required time.

Claim 8:

Lewis et al. further teach:

wherein the rotational speed of the drive motor is controlled according to the capability of the air pump when the ink vacuum device is used, refer to col. 16+, and specially lines 32-33.

Claim 9:

Lewis et al. further teach:

wherein the capability of the air pump is determined based on the correlative characteristic between the rotational speed of the drive motor and the air pressure generated by the air pump, refer to col. 16+, and specially lines 32-33.

Claim 10:

wherein the rotational speed is further controlled according to the ambient temperature of the air pump, refer to claim 7, because the driving time and the driving speed of the driving motor are all the controlled factors effecting to obtain the required pressure magnitudes within the required time.

Claim 11:

Lewis et al. further teach:

A maintenance method of inkjet printer comprising the steps of:

discharging air accumulated in ink supply paths (334 and 342, fig. 1) of an inkjet printer with a pressurized air generating device (376, fig. 1) constituted with an air pump

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(376) and a drive motor which drives the air pump (please note numeral 376 was indicated as an air compressor, which is equivalent to a pump, and in either case, a motor is required), refer to fig. 23, the third row "new ink system installed air purge from ink tubes, and the 1.5 psi is the P1, and col. 5, lines 22-25 also fig. 3 indicates a pump supplying pressurized air to an ink container; and

vacuuming the ink from an inkjet printer, refer to fig. 23, fourth row "prime print heads with positive ink pressure, and the 0.2 psi is P2,

wherein pressure of pressurized air generated by the pressurized air generating device is set at predetermined pressure P1 when the air discharge process is conducted, and is set at pressure P2 which is lower than the pressure P1 to pressurize the ink when the ink vacuum process is conducted, refer to fig. 23 the third and fourth rows.

Claim 12:

Lewis et al. further teach:

wherein, in the air discharging step, rotational speed of the drive motor is kept at a constant speed and driving time of the drive motor is controlled according to capability of the air pump, refer to col. 5, lines 28-32; and col. 13, line 16+, specially lines 32-33.

Claim 13:

Lewis et al. further teach:

wherein the driving time is further controlled according to ambient temperature of the air pump, refer to claim 12 above, because the air pressure is reliably controlled in

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required magnitude in required time, therefore, ambient temperature is also one of the factor that the APS is concerned in controlling the required pressure in required time.

Claim 14:

The maintenance method of inkjet printer as set forth in claim 11, wherein, in the ink vacuuming step, the rotational speed of the drive motor is controlled according to the capability of the air pump.

Rejection:

This claim is rejected on the basis asset forth for claim 12 discussed above.

Claim 15:

The maintenance method of inkjet printer as set forth in claim 14, wherein, the rotational speed is further controlled according to the ambient temperature of the air pump.

Rejection:

This claim is rejected on the basis asset forth for claim 13 discussed above.

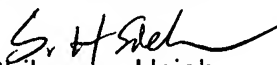
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 571-272-2256. The examiner can normally be reached on 7:30AM -5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S D. Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SHIH-WEN HSIEH
PRIMARY EXAMINER


Shih-wen Hsieh
Primary Examiner
Art Unit 2861

SWH



Dec. 22, 2005